



**CONESTOGA-ROVERS
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June 17, 2011

Reference No. 038443-12

Ms. Karen Cibulskis
Remedial Project Manager
United States Environmental Protection Agency
Region V
77 West Jackson Boulevard
Mail Code SR-6J
Chicago, IL 60604

Dear Ms. Cibulskis:

Re: Ohio EPA Comments on the Streamlined Remedial Investigation and
Feasibility Study Report for OU1, January 2011 (the Report), Received by
Ohio EPA on February 2, 2011
South Dayton Dump and Landfill Site, Moraine, Ohio (Site)

This letter presents responses to Ohio EPA's May 10 comments on the OU1 R/FS Report. Conestoga-Rovers & Associates (CRA) has prepared this letter on behalf of the Respondents to the Administrative Settlement Agreement and Order on Consent (ASAOC) for Remedial Investigation/Feasibility Study (RI/FS) of the Site, Docket No. V-W-06-C-852 (Respondents).

For ease of reference, Ohio EPA's comments are presented below in bold/italics followed by CRA's response

Ohio EPA Comment No. 1

Due to limited resources, Ohio EPA has focused review of the report on Sections 2 through 5. Ohio EPA will rely on USEPA's review of Section 1.

Response

Not Applicable



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Ohio EPA Comment No. 2

Throughout to the report, the discussion needs to clarify that Alternative 2 includes the use of a "specialty" asphalt, specifically MatCon. When referring to Alternative 2, replace the term "Asphalt Cap" with "MatCon Cap."

Response

CRA has revised the Report as requested.

Ohio EPA Comment No. 3

Section 2.2 – RAOs, p. 56, 9th bullet. This RAO addresses "contaminant leaching to ground water and surface water." Does leaching to surface water mean leaching to surface water via ground water? Please clarify.

Response

CRA clarified that this RAO addresses contaminants leaching to groundwater and ultimately to surface water.

Ohio EPA Comment No. 4

Section 2.2 – RAOs, p. 57, 1st full paragraph. This report should not restrict, let alone dictate, the mechanisms available to EPA to respond to threats to public health. Please delete this paragraph.

Response

CRA has removed the last portion of the last sentence of this paragraph to read: "*should any situations or factors that may pose a threat to public health, welfare, or the environment arise or be identified in future, they will be addressed. ~~via an amendment to the Record of Decision (ROD) or an Explanation of Significant Difference (ESD).~~*"

Ohio EPA Comment No. 5

Section 2.2.1 – ARARs, p. 59, first three paragraphs. In this section, there are three paragraphs discussing USEPA Green Remediation guidance TBCs. These are the only TBCs mentioned specifically in this section. Please remove these paragraphs from this section. This discussion could be retained by



adding it to Section 4.1.1 if the Compliance with ARAR discussion was expanded to discuss each ARAR and TBC.

Response

CRA has removed these paragraphs from Section 2, and has generally discussed in Section 4.

Ohio EPA Comment No. 6

Section 2.2.2 – Contaminant Sources, p. 60, 2nd line. If the term “media” in this sentence refers to the “contaminant source materials” mentioned earlier in the paragraph in the last line of the previous page, please revise to make the language consistent.

Response

CRA has revised the language in this section to discuss ‘contaminated media’ that will be addressed through the implementation of various processes.

Ohio EPA Comment No. 7

Section 2.2.2 – Contaminant Sources, p. 60, 2nd bullet. Please clarify if the leachate seeps that are addressed here are surface leachate seeps.

Response

CRA has clarified this bullet to indicate that this refers to leachate seeps discharging to the surface.

Ohio EPA Comment No. 8

Section 2.2.2 – Contaminant Sources, p. 60, 1st full paragraph, 1st sentence. This sentence states that “soil vapor will partially be addressed through passive LFG treatment.” Ohio EPA concurs that any soil vapors and landfill gases collected and emitted through the passive venting should be treated.

Response

The Respondents have agreed to complete a Vapor Intrusion (VI) Study to identify current risks via the indoor air pathway to receptors on and adjacent to the Site. Additional investigation of



LFG generation potential within the landfill will occur as part of RD. The need to treat soil vapor and landfill gases collected and emitted through passive venting will be determined during RD and reassessed as necessary during O&M. CRA has clarified in the relevant discussions that the appropriate treatment will be based on the VI Study and pre-design studies.

Ohio EPA Comment No. 9

Section 2.2.2 – Contaminant Sources, p. 60, 1st full paragraph, 1st sentence. In addition, this sentence states that “soil vapor will partially be addressed through passive LFG treatment,” and “will primarily be addressed external to the RI/FS process.” The current risk will be mitigated by isolating receptors from exposure. The vapor intrusion study prescribed by the dispute resolution agreement does not address this contaminant source.

Response

Concur. CRA has revised to discuss LFG and soil gas separately. Through Section 2.2.2, CRA has conceptually discussed process options to address LFG and soil vapor; however, CRA has clarified that the appropriate process options will be selected following completion of the VI Study and LFG pre-design studies.

Ohio EPA Comment No. 10

Section 2.2.2 – Contaminant Sources, p. 60, 5th bullet. Leachate migration to ground water is listed as being addressed as part of OU2. However, minimizing contaminant leaching to groundwater is an OU1 RAO, as is the RAO requiring treatment or elimination of potential hot spots as necessary to protect human health and the environment. Source area control of groundwater impacted by leachate has been deferred to OU-2, not the leaching of contaminants to that groundwater.

Response

Through containment, contaminant migration to groundwater will be minimized. Therefore, through the capping of the large volume of relatively low-level threat soil, waste, and fill and, if required, removal or remediation of hot spots, leachate migration to groundwater will be minimized. CRA has clarified this discussion throughout Sections 2, 3, and 4, as applicable.

Additionally, CRA has added discussion addressing hot spots containing principal threat waste (i.e., waste that warrants excavation or treatment consistent with USEPA policy and guidance (e.g., free-phase LNAPL, drums containing liquid or hazardous waste; other principal threat



waste that meets the conditions for warranting excavation or treatment indicated in USEPA 1993).

Ohio EPA Comment No. 11

Section 2.2.2 – Contaminant Sources, p. 60, 4th paragraph, 2nd sentence. Please change “CRA characterized much of the fill and waste material of the site” to “CRA characterized discrete areas of waste at the site.” Also, in the last sentence, delete the phrase “small isolated.” Comprehensive characterization of the waste is not practicable. Conclusions cannot be made about the scope and extent of contamination based on the limited investigation conducted to date.

Response

CRA has revised as requested.

Ohio EPA Comment No. 12

Section 2.2.2 – Contaminant Sources, Hot Spots, p. 61, last paragraph, last sentence. Available site data is not sufficient to conclude that RCRA characteristic waste is only present in “small discrete areas.” Please delete this sentence. Replace the last sentence on Page 61 with a sentence stating, as discussed by USEPA and CRA, that based on the results of the limited OUI investigation, additional investigation is warranted in areas identified by USEPA in their comments.

Response

CRA has deleted this sentence as requested.

Ohio EPA Comment No. 13

Section 2.2.2 – Contaminant Sources, Hot Spots, pages 60 – 63. Ohio EPA concurs with USEPA’s comments 8 through 14 on these pages. In summary, hot spots are identified and need to be investigated.

Response

Principal threat wastes have been identified in a number of areas and potential principal threat wastes exist in a several other areas. However, in a number of areas, these principal threat



wastes do not satisfy the USEPA definition of a hot spot¹ and, in other areas, insufficient data exist to determine whether these wastes represent hot spots. CRA has included a discussion regarding potential remedial options for hot spots containing principal threat waste (i.e., waste that warrants excavation or treatment consistent with USEPA policy and guidance (e.g., free-phase LNAPL, drums containing liquid or hazardous waste; other principal threat waste that meets the conditions for warranting excavation or treatment indicated in USEPA 1993). The full extent of these areas has not yet been defined and further investigation is required. Therefore, for conceptual purposes, CRA has identified potential treatment or removal options for areas where treatment is necessary; however, the process options will be determined following completion of additional investigations in these areas.

Ohio EPA Comment No. 14

Section 2.2.2 – Contaminant Sources, Hot Spots, pages 60 – 63. Following investigation of the hot spot and anomaly areas, it is likely that some areas will warrant treatment or removal. Please add a discussion of how the areas will be evaluated and what actions will be taken.

Response

CRA has included a discussion of what areas require further investigation and potentially treatment. CRA has also included a discussion of potential process options that may be applicable to areas of the Site where principal threat waste has been identified.

Ohio EPA Comment No. 15

Sections 2.3 and 2.4 (pages 63 through 70) and Table 2.4: These sections and Table 2.4 present the identification of general response actions and the results of the identification and screening of process options and technologies. Section 2.4.1 states: "Table 2.4 provides a list of these general response activities and a preliminary screening of the response activities." Two paragraphs later Section 2.4.1 states: "A summary of the results of this screening process, identifying retained remediation technologies, is provided in Table 2.4." The second from the last paragraph of Section 2.4.1 states: "Details of the initial assessment are provided in Table 2.4." No detail is provided in Sections 2.3, 2.4, or Table 2.4 regarding the identification and screening of general response actions, technologies, or process options. The Report needs to be revised to provide a level of detail for the identification and screening of general response actions, technologies, and process options consistent with EPA's CERCLA Municipal Landfill

¹ USEPA, *Guide to Principal Threat and Low Level Threat Wastes*, November 1991, Superfund Publication No. 9380.3-06FS



RI/FS Guidance (guidance). The SOW appended to the ASAO requires that Respondents perform the RI/FS in accordance with this guidance.

Part of the streamlined FS process inherent in the guidance is the pre-evaluation of technologies and process options based on effectiveness, implementability, and cost for waste types and waste streams commonly associated with remediation of CERCLA municipal landfills. Section 2.8.2 of the guidance explains the process EPA followed in identifying the most practicable remedial technologies for landfills, and Figure 2-5 and Table 2-3 of the guidance present the results of that process. Note that Table 2-3 associates the technologies with the environmental media being addressed. The comments under the Evaluation heading in Table 2-3 explain the conditions and/or types of contaminants for which the technologies are viable for a given environmental media. Table 2.4 of the Report should be revised to follow the format of Table 2-3 in the guidance, and the comments in the Evaluation column of the table should be made specific to the circumstances at the Site.

When more than one process option for a given technology is identified in Table 2-3 of the guidance, the process options should be evaluated based on site-specific conditions and an explanation provided for selecting one process option over another. For example, passive landfill gas venting can be accomplished using pipe vents, trench vents, or interceptor trenches. Which method is appropriate is dependent on site-specific conditions. When selecting from among the process options, explain the selection in terms of the conditions at the Site and why that selection is most appropriate for those conditions.

Sections 2.3, 2.4, and Table 2.4 should be substantially revised to follow the guidance. There is no need to evaluate the process options for effectiveness, implementability, or cost. EPA has already conducted those evaluations in the guidance itself. Issues with effectiveness, implementability, and cost which may arise when more than one process option is identified for a given technology and environmental media should be addressed in the Evaluation column of Table 2.4 and in the discussion of the results of the site-specific screening presented in Sections 2.3 and 2.4 of the Report.

The following comments on Sections 2.3 and 2.4 of the Report respond to those sections as currently presented. The majority of these comments would be addressed by revising Sections 2.3, 2.4, and Table 2.4 of the Report as discussed above, i.e., to be consistent with and to take advantage of the prescreening conducted in the guidance.

Response

CRA has presented the results of the screening on Table 2.2 (formerly Table 2.4), to clearly show how the process options have been refined. CRA has revised Section 2.3 to include discussion of the criteria that are used in the screening, and more details as to how various technologies would be applicable to address specific media. Where there is insufficient data to fully screen process options (e.g., LFG), CRA has conceptually identified options that could address the contaminants and has discussed what investigations or data would be needed to appropriately



select a process option. Details regarding the types of vents required for passive venting will be determined during RD. Several different venting options are feasible for the Site and the decisions as to which option or combination of options to use will be made during RD. The type of vent chosen has no affect on the suitability of the remedy as a whole or on the cost of the remedy, especially given that the passive venting option and other non-cap components are common to both Alternatives 2 and 3. For the Site, it is solely the type of cap that drives the evaluation of the remedy.

CRA has revised Table 2.2 to discuss an extended list of process options applicable to the remedy.

Ohio EPA Comment No. 16

Section 2.3 – General Response Actions, p. 63, 1st full paragraph. It is not clear what the phrase “each of these contaminant sources” refers to. Please clarify what the contaminant sources are.

Response

CRA has clarified that the response actions are intended to address the contaminated media at the Site identified in Section 2.2.2.

Ohio EPA Comment No. 17

Section 2.3 – General Response Actions, p. 63, 2nd paragraph. The No Action general response action provides a baseline against which to compare other alternatives, but not other general response actions. Please revise.

Response

CRA has revised as requested.

Ohio EPA Comment No. 18

Section 2.3 – General Response Actions, p. 63, 3rd paragraph. Institutional controls lessen the likelihood of exposure but cannot isolate potential receptors or eliminate exposure pathways. Please revise accordingly.



Response

CRA has revised as requested.

Ohio EPA Comment No. 19

Section 2.3 – General Response Actions, p. 63, fifth and sixth paragraphs. Physical, chemical, and biological actions are remedial technologies for treatment, not general response actions. The response action collection/treatment needs to be separated into collection, as one response action, and treatment, as another. In terms of scope, the general response actions should be consistent with the general response actions identified in the guidance, and the technologies and process options mixed in with the general response actions should be separated out and classified as such consistent with the guidance.

Response

CRA has included a text table that links the general response action groups to specific media at the Site. Additionally, CRA has listed out the response actions included in each group, and which specific response actions would be applicable to specific media at the Site.

Ohio EPA Comment No. 20

Section 2.4.2 – Evaluation of Technologies and Selection of Representative Technologies, p. 65, 7th bullet. It is not possible to evaluate decisions based upon CRA's previous experience and engineering judgment in the absence of any supporting documentation. Either provide the documentation or delete these criteria. Note that EPA's previous experience regarding cost of landfill technologies is incorporated and documented throughout the guidance. This obviates the need to rely on CRA's previous experience and professional judgment.

Response

CRA disagrees with this requested revision. CRA has implemented numerous remediations, which have included all of the process options considered in this remedy. Through this experience, CRA has specific knowledge regarding the effectiveness of various process options to address contaminants. CRA also has specific knowledge regarding the costs to implement these process options based on recent projects at similar sites in Region 5. The use of costs from general guidance documents that are as much as 20 years old in preference to costs based on recent local experience would result in less accurate estimates of the actual cost of the remedies. Therefore, CRA has not revised the document as requested.



Ohio EPA Comment No. 21

Section 2.4.2.1 – Landfill Cap, p. 66, 2nd bullet. Please discuss how capping will remediate the wetlands, including how mitigation will be addressed.

Response

CRA has specified that wetlands will be remediated if any are identified, through containment of contaminants. CRA has also indicated that if the Large Pond and Small Pond are wetlands, then mitigation will be required through construction of new wetlands.

Ohio EPA Comment No. 22

Section 2.4.2.1 – Landfill Cap, p. 66, 1st full paragraph, last sentence. A cap designed to accommodate businesses currently present on the Site will require ARAR waivers for the composition of the cap and also need to meet the substantive requirements for a variance for a slope of less than 5%. The substantive requirements for a variance will need to be met for any cap that does not meet slope requirements.

Response

CRA has revised as requested.

Ohio EPA Comment No. 23

Section 2.4.2.1 – Landfill Cap, p. 66, 3rd full paragraph. The text states that the cap(s) will be graded to direct storm water to the edge of the cap(s). Please continue the discussion and describe how storm water will be managed beyond the edge of the cap(s).

Response

CRA has included discussion of the requirements of OAC 3745 27-08(D)(2) and OAC 3745 27-08(D)(3) and has indicated that these requirements will be met through the design of storm water controls.



Ohio EPA Comment No. 24

Section 2.4.2.1 – Landfill Cap, p. 66, 4th full paragraph. Please clarify what types of waste would be disposed of off-site and what waste would be consolidated under the cap.

Response

CRA has clarified that any non-hazardous waste materials that need to be moved during cap construction will be consolidated within the cap area. Any hazardous waste materials that are removed before or during cap construction will be properly characterized and disposed of off-Site at an appropriately licensed location.

Ohio EPA Comment No. 25

Section 2.4.2.2 -- Monitoring and Passive Venting of LFG, p. 66, 5th paragraph, 2nd sentence. It is unknown how much decomposable waste is present in the landfill. Please revise this section to state that the landfill may not generate sufficient LFG to necessitate an active collection system.

Response

CRA has included discussion of a pre-design study that would be completed to determine the potential for LFG generation. This would initially include a LFG study to further confirm the potential for LFG generation to determine if an active treatment system is necessary. If the results of the pre-design study indicate that an active treatment system may be required, the remedial design would include both the potential for LFG generation and an assessment of the radius of influence of each vent for the purpose of determining the necessary vent spacing. This would be completed by applying a Tier 3 Drawdown Test at three locations across the Site in accordance with USEPA Method 2E². The tests will be completed at the approximate locations of GP-01, GP-02, and GP-18.

Ohio EPA Comment No. 26

Section 2.4.2.2 -- Monitoring and Passive Venting of LFG, p. 67, 1st paragraph, 2nd sentence. It is unclear how passive venting addresses the contaminant risk from NMOCs. Please delete this sentence.

²Method 2E – Determination of Landfill Gas Production Flow Rate



Response

Passive venting of LFG will remove non-methane organic compounds (NMOCs) in the same way that it would address methane. That is through the transfer of the NMOCs from the subsurface to the atmosphere, where they will not pose a risk, either due to the low concentration of the NMOCs at the receptors or through the use of treatment if required.

CRA has added additional discussion of venting soil vapor in Section 2.4.2.4.

Ohio EPA Comment No. 27

Section 2.4.2.2 -- Monitoring and Passive Venting of LFG, p. 67, 2nd paragraph, 1st sentence. Please delete the phrase "if required."

Response

CRA has clarified in the text that there is still some uncertainty with respect to the need to vent LFG in some areas of the Site.

Ohio EPA Comment No. 28

Section 2.4.2.2 -- Monitoring and Passive Venting of LFG, p. 67, 2nd paragraph. Please provide more detail on the construction of the passive vents, i.e. the length and depth of the perforated pipe, the size of the outer orifice, the expected radius of influence, and why three vents at each location are expected to be sufficient. Are there areas (such as adjacent to the existing businesses) where interceptor trenches might be more appropriate than pipe vents? Why or why not?

Response

CRA has included additional detail in the text and has provided a figure for conceptual purposes of a typical LFG passive vent.

Ohio EPA Comment No. 29

Section 2.4.2.2 -- Monitoring and Passive Venting of LFG, p. 67, 2nd paragraph, 7th sentence. The text states that "where applicable, the vents will be installed ..." Please explain by describing under what circumstance the perforated pipe would not be installed beneath the FML. As suggested in the text,



additional vents may be required based on the results of the VI (and methane) study. If vents are needed in the area of the MatCon cap of Alternative 2, how will they be installed so as to not interfere with the businesses and not present risk if the emissions are not treated?

Response

At locations where an FML will be installed (i.e., in areas covered by a SW Cap), the perforated pipe will be installed beneath the FML. In areas covered by a MatCon cap, no FML will be used, and, consequently, the perforated pipe will not be installed beneath the FML. CRA has clarified the text.

Ohio EPA Comment No. 30

Section 2.4.2.2 -- Monitoring and Passive Venting of LFG, p. 68, 2nd paragraph. The objective of the quarterly explosive gas monitoring prescribed in OAC 3745-27-12 is to monitor for explosive gases around a landfill to protect human health and the environment. Additional monitoring may be necessary to evaluate the performance of the LFG collection system and building interior monitoring will be needed due to the businesses located on top of the landfill. Also, the LFG system described in this section does not include any treatment. Please revise this sentence.

Response

CRA has revised this paragraph as requested.

Specifically, CRA has included a discussion regarding the monitoring of LFG around the landfill. CRA has also included a figure showing the locations of punch bar stations and explosive gas monitors at off-Site locations.

CRA has also discussed the parameters that will be measured, and trigger thresholds that would require upgrade from a passive system to a passive system with treatment or an active system. CRA has also included discussion of some trigger mechanisms that will determine if upgrade to an active treatment system is needed.

Ohio EPA Comment No. 31

Section 2.4.2.3 – Monitoring and Passive Venting of Soil Vapor, p. 68, 3rd and 4th full paragraphs. CRA is conducting an interim response action to address potential current explosive gas and soil vapor intrusion risks at on-Site buildings. The interim response measures are temporary measures to address potential current exposures, similar to providing bottled water to an impacted private drinking water well



user, and not long-term solutions for the risks associated with landfill gas or soil vapor. However, one of the remedial action objectives is to "control and, if necessary, treat landfill gas and soil vapor within OUI that pose an unacceptable or potential future risk to human health and the environment." Therefore, this pathway should be included in the FS and technologies need to be identified and evaluated which provide long-terms solutions to address this RAO.

Response

CRA has added a discussion of potential treatment options to address soil vapor in and around buildings. CRA has also specified that the appropriate treatment options will be determined following completion of the VI Study.

Ohio EPA Comment No. 32

Section 2.4.2.3 – Monitoring and Passive Venting of Soil Vapor, p. 68, 3rd full paragraph. Please add a discussion of how the soil vapor pathway may be affected by capping the landfill around the on-Site structures, i.e., with a continuous, impermeable surface around and sealed to the buildings. Please also discuss the use of active soil vapor systems to address any current threats that might be identified during implementation of the VI work plan.

Response

CRA has included discussion in this section of the potential construction of specific treatment options. One of the treatment options discussed is an active sub-slab depressurization system. CRA has added a figure for conceptual purposes that shows a sub-slab depressurization system.

Ohio EPA Comment No. 33

Section 2.4.2.3 – Monitoring and Passive Venting of Soil Vapor, p. 68, 4th full paragraph. If unacceptable risks are identified within on-Site buildings, active systems such as sub-slab depressurization systems would need to be installed, not passive systems. Please revise this sentence, replacing the term "passive" with "active".

Response

CRA has revised as requested.



Ohio EPA Comment No. 34

Section 2.4.2.3 – Monitoring and Passive Venting of Soil Vapor, p. 68, 4th full paragraph. Please revise this sentence, removing the phrase “for the first two years.” Monitoring will need to continue until the threat is no longer present.

Response

CRA had intended this sentence to indicate that monitoring will initially be completed quarterly for a period of two years. Following two years, depending on whether there is a risk to receptors, the frequency of monitoring may be decreased to semi-annually. It was and remains CRA’s intention that monitoring continue until such time as the data indicate that no risk to receptors exists or will exist in future. CRA has clarified the text accordingly.

Ohio EPA Comment No. 35

Section 2.4.2.4 – Leachate Monitoring, p. 68, last paragraph. This section only addresses part of the second RAO. Please add to this section to clarify that this section only addresses contaminant leaching to the surface and surface water but does not address leaching to groundwater or groundwater to surface water. Revise this discussion (and elsewhere throughout the FS) to insert the word “surface” in front of leachate each time it is mentioned. Revise statement in the paragraph at the top of page 69 to clarify that following installation of the cap, generation of leachate due to infiltration of precipitation is expected to be minimal. Clarify that subsurface leachate controls (if needed) will be addressed in OU-2 and are not part of this study.

Response

CRA has revised as requested.

Ohio EPA Comment No. 36

Section 2.4.2.5 – Valley Asphalt Production Well Monitoring, p. 69, 2nd full paragraph. Please add to this paragraph to clarify what is meant by “verified results” and identify the exposure pathway as the potable use (drinking water) pathway.

Response

CRA has added a discussion of the results of samples collected from the Valley Asphalt monitoring well and expanded this discussion to include potential receptors.



Ohio EPA Comment No. 37

Section 2.4.2.8 – Engineering Controls, p. 69, 3rd full paragraph. Please add to this paragraph to describe in more detail what would be necessary to accommodate “the active businesses to ensure that they are not unduly affected during construction.” This information is needed in order to evaluate short-term effectiveness of this alternative.

Response

CRA has added discussion of temporary fencing and hoarding around work zones to minimize the potential exposure to employees or customers.

Ohio EPA Comment No. 38

Section 2.4.2.9 – Institutional Controls, p. 69, last paragraph. Please add to this paragraph to specify which RAOs would be achieved using institutional controls and provide more detail regarding what use restrictions are likely to be needed and how they would be implemented.

Response

CRA has revised this section to discuss institutional controls in more detail, including what use restrictions are likely to be needed and how they would be implemented.

Ohio EPA Comment No. 39

Section 2.4.2.9 – Institutional Controls, p. 69, last paragraph. Add to this section a discussion of Ohio’s environmental covenant law and how it is the mechanism for enforcing institutional controls. Please identify the use restrictions likely to be included in the covenant.

Response

CRA will include this discussion as requested.



Ohio EPA Comment No. 40

Section 2.4.2.9 – Institutional Controls, p. 70, 1st paragraph. Please clarify if the Soil Management Plan is part of the covenant. Is this intended to be the vehicle for complying with ORC 3734.02(H) and OAC 3745-27-13, authorization to disturb land where a hazardous waste facility, or a solid waste facility, was operated? If so, please discuss here and in the ARAR analysis table (see attached General ARAR comments previously provided to EPA for regarding the need for a single, comprehensive ARAR table.)

Response

CRA has clarified that the soil management plan is part of the covenant and included the requested ARAR discussion.

Ohio EPA Comment No. 41

Section 2.4.2.9 – Institutional Controls, p. 70, last paragraph: The link between CRA's LFG modeling and the referenced institutional controls is unclear. If there is no risk associated with the landfill gas, why are the institutional controls needed?

Response

CRA has removed this last paragraph from this section.

Ohio EPA Comment No. 42

Section 3.1 -- Development of Alternatives, p. 71, 1st sentence. It is the development of alternatives that is streamlined, not the alternatives themselves. Revise accordingly.

Response

CRA has revised as requested.

Ohio EPA Comment No. 43

Section 3.1 -- Development of Alternatives, p. 71, 2nd sentence. Please replace the text here with the actual purpose for including the no action alternative, specifically that the no-action alternative is required as part of the NCP and provides a baseline against which other alternatives can be compared.



Response

CRA has revised as requested.

Ohio EPA Comment No. 44

Section 3.1 -- Development of Alternatives, p. 71, 1st bullet, Alternative 2. Please clarify that the asphalt cap is not just asphalt; it is specialty low-permeability asphalt – MatCon. Plain roadway-type asphalt would not be acceptable. Also, include in the description that this is not an ARAR compliant cap and the composition of the cap would require ARAR waivers from USEPA. The solid waste cap portion of Alternative 2 would be ARAR compliant by meeting the substantive requirements for obtaining a variance for the minimum 3% slope. Please revise accordingly.

Response

CRA has revised as requested.

Ohio EPA Comment No. 45

Section 3.1 -- Development of Alternatives, p. 71, 4th paragraph, Alternative 3. This alternative is described as “the most conservative, Presumptive Remedy approach within the remedial spectrum.” This is not accurate. Please delete this text. Alternatives are required to meet ARARs or justify a NCP waiver. This is the ARAR compliant alternative, meaning it is the minimum necessary to meet regulatory requirements.

Response

CRA has revised as requested.

Ohio EPA Comment No. 46

Section 3.1 -- Development of Alternatives, p. 71, last bullet. This bullet discusses LFG venting. As stated above, passive venting is inappropriate for structures at risk from landfill gas. Active systems are likely necessary to protect building occupants if methane is an issue, and active sub-slab depressurization systems may also be necessary to address vapor intrusion.



Response

CRA notes that both USEPA and Ohio EPA guidance list passive venting as an acceptable option for vapor intrusion mitigation in appropriate circumstances. CRA has included discussion of other process options, including sub-slab depressurization. The appropriate process option will be determined following completion of the VI Study and appropriate pre-design studies.

Ohio EPA Comment No. 47

Section 3.1 -- Development of Alternatives, p. 72, 1st bullet. Add to the feasibility study the cost of the contingency plan for the Valley Asphalt wells and provide more detail on the contingencies.

Response

CRA will revise as requested.

Ohio EPA Comment No. 48

Section 3.1 -- Development of Alternatives, p. 72, 2nd and 3rd bullet. Add more detail on the LFG and soil vapor monitoring.

Response

CRA has included additional discussion in both Section 2 and Section 3 discussing LFG and soil vapor monitoring.

Ohio EPA Comment No. 49

Section 3.1 -- Development of Alternatives, p. 72, 7th bullet. Add more detail on the perimeter fencing and other access controls such as signs. USEPA's guidance "Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites" specifies that fencing is warranted at landfills where passive venting of landfill gas is being used. In addition, signs would need to be posted on the fence to warn potential trespassers that there may be a health threat associated with going on the Site.



Response

CRA has included additional discussion in both Section 2 and Section 3 discussing permanent fencing, temporary fencing, and signs that will be used to control access to the Site.

Ohio EPA Comment No. 50

Section 3.1 -- Development of Alternatives, p. 72, 2nd paragraph. "Minimizing contaminant leaching to groundwater" is one of the remedial action objectives, however the "common components" of the remedial alternatives described here do not affect contaminant leaching to groundwater. Addressing hot spots would. To address the fourth remedial action objective, "treat or eliminate high levels of hazardous substances, pollutants, or contaminants (hot spots) to the extent practicable and necessary to protect human health and the environment," hot spots need to be investigated and addressed as a common component of Alternatives 2 and 3.

Response

CRA has revised this section accordingly.

Ohio EPA Comment No. 51

Section 3.1 -- Development of Alternatives, p. 73, cap design figure. The cap design layers in this figure do not agree with the details elsewhere in the report, in Figure 3.1, in Table 3.1, and in Appendix D. The Asphalt cap (which should be identified as the MatCon cap), is described as 4" of MatCon asphalt, however, elsewhere, such as in Table 3.1, it is described as 2" of asphalt and 2" of MatCon. Also, in this figure the soil barrier layer is described as 12" thick, however, elsewhere in the report is it described as 18". Note that a 18" compacted soil barrier layer is required by OAC 3745-27-08 (D)(a)(i). Please resolve the discrepancies and correct this figure.

Response

CRA has revised as requested.

Ohio EPA Comment No. 52

Section 3.2 -- Screening of Alternatives, p. 73, 2nd paragraph, 1st sentence. Direct contact (soil?) is suggested to be the primary exposure pathway, however only one RAO addresses direct contact. Please also discuss the other exposure pathways at the Site inherent in the remainder of the RAOs and how they



and all of the RAOs (including those that identify routes of contaminant migration as opposed to exposure pathways) will be addressed. Delete "primary" from the discussion of exposure pathways. All exposure pathways inherent in the RAOs need to be addressed, not just direct contact. Note that not all RAOs are effectively addressed by containment (such as potential hot spots) and revise the last part of the first sentence accordingly.

Response

CRA has substantially revised Sections 3.1 and 3.2, and consider all of the RAOs (as opposed to only considering direct contact) in the screening of alternatives.

Ohio EPA Comment No. 53

Section 3.2 – Screening of Alternatives, p. 73, 2nd paragraph, last sentence. The statements here are made without substantiation. Please delete this sentence.

Response

See Response to Comment No. 20. CRA disagrees with this requested revision.

Ohio EPA Comment No. 54

Section 3.2 – Screening of Alternatives, p. 73, last paragraph, 1st sentence. Please add to this sentence that the HELP model evaluates the performance of the containment options with respect to preventing vertical infiltration.

Response

CRA has revised as requested.

Ohio EPA Comment No. 55

Section 3.2 – Screening of Alternatives, p.74, last sentence before section 3.2.1. The only alternative that could be screened from further consideration is Alternative 2 due to the non-ARAR compliant cap. Alternative 3 is not subject to screening based on the HELP model and is only evaluated using the HELP model to provide a basis for comparison of the results of the HELP model as applied to Alternative 2 in support of requesting a NCP equivalency waiver with respect to prevention of vertical infiltration.



Response

As requested by USEPA (April 12, 2011 email), CRA has screened both Alternative 2 and Alternative 3 based on the HELP model to compare performance with respect to vertical infiltration. As the slope in Alternative 3 would be reduced to 3 percent, screening using the HELP model to compare to the results of a Solid Waste Cap with a 5 percent slope is appropriate to “provide support for...reasonably anticipated slope variances.”

Ohio EPA Comment No. 56

Section 3.2.2 – Remedial Alternative 2, p. 74, 3rd full paragraph. Add to this paragraph a statement that the MatCon cap will require NCP ARAR waivers and that the HELP model will assist with an equivalency determination only with respect to vertical infiltration.

Response

CRA has substantially revised Sections 3.1 and 3.2; however CRA concurs with Ohio EPA’s requested revision. CRA has modified appropriate discussions accordingly.

Ohio EPA Comment No. 57

Section 3.2.2 – Remedial Alternative 2, p. 74, last paragraph. This paragraph should be replaced with the reason this alternative relies on a solid waste cap in the areas outside of the current businesses – compliance with applicable ARARs. The results of the HELP model as applied to the ARAR compliant cap are used as a basis for comparison of the performance of the MatCon cap with respect to vertical infiltration. If the MatCon cap was not being considered, there would be no need to run the HELP model on the ARAR compliant SW cap. The ARAR compliant SW cap does not survive screening because of the HELP model, it survives because it complies with ARARs.

Response

CRA will revise accordingly.

Ohio EPA Comment No. 58

Section 3.2.2 – Remedial Alternative 2, p. 74, footnote 23. The conclusion that the two caps are functionally equivalent needs to be qualified. The HELP model only evaluates vertical infiltration.



Justification for the other ARAR waivers needed to implement Alternative 2's MatCon cap still need to be provided.

Response

CRA has substantively addressed this comment in Section 4.2.2, where a detailed evaluation of alternatives was completed.

Ohio EPA Comment No. 59

Section 3.2.2 – Remedial Alternative 2, p. 75, 1st paragraph and 3rd paragraph, and Section 3.2.3 – Remedial Alternative 3, p. 76, 4th paragraph. Inspection and monitoring programs are important components of remedies where waste is left in place. Monitoring programs are essential to demonstrate that containment remedies are capable of achieving and maintaining protection over time. Therefore, please provide more details on these programs and which remedial components and exposure pathways they will monitor. Also, include the inspection and monitoring program activities in the alternatives cost estimates.

Response

CRA has added additional discussion to Sections 2, 3, and 4 that elaborate on the required monitoring programs for specific media to confirm effectiveness of the remedy.

Ohio EPA Comment No. 60

Section 3.2.2 – Remedial Alternative 2, p. 75, 2nd paragraph. MatCon's literature indicates a minimum grade of 1.5%. Please change the text to a minimum 1.5% grade for the MatCon cap. Also, Ohio EPA understands that the solid waste cap component of the alternative has been revised and will be constructed with a minimum 3% grade. Please revise the text to reflect this change. In addition, please add a discussion of how the storm water will be managed once it leaves the edge of the cap. This needs to be discussed for the MatCon cap area as well.

Response

CRA has revised as requested and has provided additional details (including a figure) to demonstrate how storm water will be managed towards the edge of the cap.



Ohio EPA Comment No. 61

Section 3.2.2 – Remedial Alternative 2, p. 75, ARAR Variance/Waiver Approvals. Revise this section to separate out the discussion of waivers and the discussion of variances. Clarify that the MatCon cap component of Alternative 2 does not comply with ARARs and hence will require NCP waivers for the non-compliant components (such as the drainage layer and other deviations) in order to be eligible for selection. In the discussion of variances, clarify that meeting the substantive requirements for obtaining a variance under Ohio's solid waste rules complies with ARARs and no NCP waivers are required. The solid waste cap component of Alternatives 2 and 3 will comply with ARARs by meeting the substantive requirements for obtaining a variance under Ohio's solid waste rules.

Response

CRA has substantively addressed this comment in Section 4.2.2, where a detailed evaluation of alternatives was completed.

Ohio EPA Comment No. 62

Section 3.2.2 – Remedial Alternative 2, p. 75, fifth paragraph, and Section 3.2.3 – Remedial Alternative 3, p. 76, last paragraph. Both the SW cap (minimum 3% slope) and the MatCon cap (minimum 1.5% slope) will require a variance from the 5% grade requirement contained in OAC 3745-27-08. Add the following text to the report, in both sections, and remove the OAC 3745-27-08(C)(4)(c) from Table 3.2:

"The substantive requirements for a variance from Ohio's solid waste rules to allow an alternate grade for the cap would need to be addressed as follows:

<i>Citation</i>	<i>Description</i>	<i>Proposed Variance</i>
<i>OAC 3745-27-08(C)(4)(c)</i>	<i>Cap shall have at least</i>	<i>The SW cap would have a</i>
	<i>a. 5 percent grade in all</i>	<i>grade of approximately</i>
	<i>b. areas except where</i>	<i>3 percent minimum instead</i>
	<i>c. surface water control</i>	<i>of 5 percent</i>
	<i>d. structures are located</i>	

"The substantive requirements of OAC 3745-27-03 "Exemptions and Variances" paragraph (C) "Variances" would need to be met. The OAC identifies that variances to most of the Ohio Solid Waste and Infectious Waste Regulations may be granted if the variance will not create a nuisance or hazard to public health or safety or the environment and is unlikely to result in a violation of any other requirements of chapters 3704, 3734, and 6111. OAC 3745-27-03(C)(2) states that "Applications for variances shall identify the provision(s) of the regulations for which the variance is requested and shall contain information regarding the reason and justification for the variance, and any other pertinent data



regarding the application as the director may require for the demonstration...". As stated in OAC 3745-27-11 "Final Closure of a Sanitary Landfill Facility" paragraph (H)(2) "Other Closure Activities":

"The owner or operator shall install the required surface water control structures including permanent ditches to control run-on and runoff and sedimentation pond(s), as shown in the final closure/post-closure plan, and as necessary, grade all land surfaces to prevent ponding of water where solid waste has been placed and institute measures to control erosion.

"As indicated above, the performance standard for the cap is to prevent ponding of water where solid waste has been placed. The old age of the waste at this site is such that any future settlement would be minimal. Substantive requirements identified by Ohio EPA for varying from the 5 percent grade contained in OAC 2745-27-08(C)(4)(c) include: 1) performance of a stability analysis as part of RD to establish whether an alternate grade of not less than 3 percent could be implemented, and 2) acceptance of the final cap design by Ohio EPA's Division of Solid and Infectious Waste Management.

"Such a stability analysis would be performed in accordance with Ohio EPA's "Geotechnical and Stability Analyses for Ohio Waste Containment Facilities" (September 14, 2004) to demonstrate that the cap could be designed and constructed such that positive drainage is achieved and maintained. Design and construction of the cap would include surface water control structures including permanent ditches to control run-on and run-off, sedimentation pond(s), erosion control measures, and grading of all land surfaces to achieve positive drainage and prevent ponding of water where solid waste has been placed. Any significant settlement that may result in ponding of water would be managed through corrective action to be included in the O&M plan."

Response

CRA has substantively addressed this comment in Section 4.2.2, where a detailed evaluation of alternatives was completed.

Ohio EPA Comment No. 63

Section 3.2.2 – Remedial Alternative 2, p. 75, 5th paragraph and Table 3.2. Table 3.2 is mislabeled as Summary of Required ARAR Variances. Most of the cap design components listed in the table will require ARAR waivers, not variances. As discussed above the only variance contemplated would be for cap grade. According to Table 3.2 the MatCon cap would require four NCP waivers of the requirements of OAC 3745-27-08, Sanitary Landfill Construction, for the following cap requirements: "18 inch recompacted soil barrier layer, flexible membrane liner, 12" drainage layer, and 30" cap protection layer. Please revise the text and Table 3.2 accordingly.



The NCP identifies six circumstances under which an alternative that does not meet an ARAR may be selected. Of these six circumstances, only Circumstance #4 (The alternative will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, or limitation through use of another method or approach) is relevant.

Revise Table 3.2 as a Summary of Required ARAR Waivers. In the Justification column, replace the current text with technical explanations. For example, Ohio EPA relies on U.S. EPA's Hydrologic Evaluation of Landfill Performance (HELP) model to evaluate the performance of alternate cap designs with respect to vertical infiltration. Provide additional justification, including technical and/or engineering justification, for obtaining an equivalency waiver for all components of the capping system which do not comply with ARARs. Remove the inappropriate generalizations regarding the classifications of the waste material.

Response

CRA has revised as requested.

Ohio EPA Comment No. 64

Section 3.2.3 – Remedial Alternative 3, p.76, 2nd paragraph. First, the current businesses would not need to cease operations permanently; they would need to relocate. Please revise the text. Also, here CRA has stated that “any significant future commercial use of the Site will be prohibited.” Why? Since this alternative is the same as Alternative 2 with respect to the risks inherent in passive LFG venting, add the above statement regarding prohibition of future commercial use to Section 3.2.2 (the description of Alternative 2) for the area in which the passive vents are located.

Response

CRA has clarified this paragraph to indicate that to implement Alternative 3, the buildings will need to be demolished in order to install the SW cap and, without substantial modification, buildings and heavy traffic on top of the SW cap would damage the cap and compromise its integrity.

Businesses may be able to relocate if suitable premises can be found or constructed at a location that is suitable based on the customer base and nature of the individual business. However, it is not certain whether this will be possible in all cases and to what extent the disruption of the business during and after any move will affect the viability of the business.



Ohio EPA Comment No. 65

Section 3.2.3 – Remedial Alternative 3, p. 76, 3rd paragraph. Delete this paragraph. A “conservative approach” has nothing to do with why this alternative is retained, nor does the HELP model results. It is retained because alternatives must either comply with ARARs or justify a NCP waiver.

Response

CRA has revised as requested.

Ohio EPA Comment No. 66

Section 3.2.3 – Remedial Alternative 3, p. 76, 4th paragraph. As discussed previously, more detail needs to be provided regarding post-closure care requirements, storm water management, and monitoring.

Response

CRA has included additional details regarding post-closure care, as requested.

Ohio EPA Comment No. 67

Section 3.2.3 – Remedial Alternative 3, p. 76, ARAR variance approvals. Revise to indicate that the substantive requirements for a variance will need to be met to use a slope of less than 5%.

Response

CRA has substantively addressed this comment in Section 4.2.3, where a detailed evaluation of alternatives was completed.

Ohio EPA Comment No. 68

Section 4.0 – Detailed Analysis of Remedial Alternatives, pp. 77 & 78. Please replace the nine criteria definitions with the definitions in the NCP (found in 55 FR 8849 and 55 FR 8850).



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Response

CRA will revise as requested.

INDIVIDUAL ANALYSES OF ALTERNATIVES

Ohio EPA Comment No. 69

Section 4.2 – Individual Analysis of Alternatives, p. 79, 1st paragraph. This paragraph appears to be from another report. Section 3 does not include detailed descriptions of the alternatives; also there are three individual alternatives, not eight. Please revise the text.

Response

CRA has revised as requested.

Ohio EPA Comment No. 70

Section 4.2 – Individual Analysis of Alternatives, pp. 79 – 87, Sections 4.2.1, 4.2.2, and 4.2.3. Provide at least a bulleted description of each alternative's components.

Response

CRA has revised as requested.

Ohio EPA Comment No. 71

Section 4.2.1 – Remedial Action Alternative 1 – No Action, p. 79, 2nd paragraph. Correct the risk assessment reference. Replace "BRA" with "streamlined risk assessment."

Response

CRA has revised as requested.



Ohio EPA Comment No. 72

Section 4.2.1 – Remedial Action Alternative 1 – No Action, p. 79, 3rd paragraph. Identify the ARARs that will not be met.

Response

CRA has revised to indicate that the OAC 3745-27 ARARs with respect to closure would not be met.

Ohio EPA Comment No. 73

Section 4.2.1 – Remedial Action Alternative 1 – No Action, p. 79, 4th paragraph. Please add to this discussion, pointing out that RAOs will not be met and identifying the risks that remain.

Response

CRA has revised as requested.

Ohio EPA Comment No. 74

Section 4.2.1 – Remedial Action Alternative 1 – No Action, p. 79, 5th paragraph. Delete the last phrase of this sentence. The continued decomposition of the waste mass is not treatment.

CRA has not implied that continued decomposition of waste mass is treatment. Rather, CRA has indicated that organic waste will continue to decompose even under a 'No Action' scenario. As such, the volume and mass of waste will decrease under this scenario.

SECTIONS 4.2.2 AND 4.2.3, OVERALL PROTECTION OF HUMAN
HEALTH AND THE ENVIRONMENT, P. 80 AND P. 84.

Ohio EPA Comment No. 75

Please expand the assessments of the “overall protection of human health and the environment” criterion to describe how each RAO is met and how each of the potential threats and exposure pathways (not just direct contact) is addressed. Note that overall protection also requires an evaluation of a composite of factors assessed under other evaluation criteria, especially long-term effectiveness and permanence,



short-term effectiveness, and compliance with ARARs, and include evaluation of these factors in this assessment.

Response

CRA has revised as requested.

SECTIONS 4.2.2 AND 4.2.3, COMPLIANCE WITH ARARS, P. 80 & 81 AND P. 84 & 85:

Ohio EPA Comment No. 76

a) Separate the discussion of NCP waivers and variances under Ohio's solid waste rules. Clarify exactly what NCP waivers would be needed and what specific rules would be waived. Provide a justification for each NCP waiver sought. Clarify what variance would be needed and what specific rules would be varied from. Identify the substantive requirements that would need to be met to obtain the variance. See Comment 61.

Response

CRA has revised as requested.

Ohio EPA Comment No. 77

b) Delete reference to OAC 3745-29, OAC 3745-30, and OAC 3745-400 throughout the FS. They are not ARARs for this Site.

Response

CRA has revised as requested.

Ohio EPA Comment No. 78

c) Clarify that a minimum 3% slope is being considered for the undeveloped central portion of the Site in Alternative 2 and for Alternative 3. Add to the text, as discussed in Comment 62, that a variance for reduced slope will be based upon: 1) performance of a stability analysis as part of RD to establish whether an alternate grade of not less than 3 percent could be implemented, and 2) acceptance of the final cap design by Ohio EPA's Division of Solid and Infectious Waste Management.



Response

CRA has revised as requested.

Ohio EPA Comment No. 79

d) As mentioned in above comments, storm water management, post-closure care, and institutional controls are important components of the remedial alternatives, too important to defer to the RAP. Add to Sections 4.2.2 and 4.2.3 information about these components sufficient to demonstrate compliance with applicable ARARs.

Response

CRA has revised as requested.

Ohio EPA Comment No. 80

e) In these sections and throughout the report, clarify that the leachate addressed by OU1 is limited to surface leachate. Replace "leachate" with "surface leachate" throughout the Report.

Response

CRA has revised as requested.

Ohio EPA Comment No. 81

f) In Section 4.2.3, the text states that Alternative 3 will address ARARs relating to LFG through passive venting. Alternative 2 also includes passive venting of LFG. For both alternatives, in the text, expand the section to list the LFG ARARs and air emission ARARs and discuss how they will be met.

Response

CRA has revised as requested.



Ohio EPA Comment No. 82

g) The USEPA Superfund Green Remediation Strategy and the Principles for Greener Cleanups are misapplied throughout this report. Green remediation does not address site reuse. Green remediation is defined by USEPA in the Superfund Green Remediation Strategy as "considering all environmental effects of remedy implementation and incorporating options to minimize the environmental footprints of a cleanup." Example green remediation strategies are best management practices for excavation and surface restoration, pump and treat technologies, bioremediation, soil vapor extraction & air sparging, clean fuel & emission technologies for site cleanup, and integrating renewable energy into site cleanup. The last two, clean fuel and integrating renewable energy into site cleanup, may be the most applicable to Alternatives 2 and 3, as would methane combustion at the passive vents to reduce greenhouse gas emissions. Please replace the first paragraph on page 85 with discussions in Sections 4.2.2 and 4.2.3 of how these green remediation strategies can be incorporated into the alternatives.

Response

CRA has revised discussion with respect to the USEPA Superfund Green Remediation Strategy and the Principles for Greener Cleanups to indicate that any remedial response will be designed to consider these 'To Be Considered' (TBC)'s to the extent possible.

Ohio EPA Comment No. 83

h) Section 4.2.2, p. 80, last paragraph, Compliance with ARARs. Under Alternative 2, the reduced slope under consideration for the MatCon cap is minimally 1.5%, not 1%. Also, the fourth sentence is inaccurate and needs to be revised or deleted. Ohio EPA has not approved MatCon or an asphalt cap at a similar site. Provide documentation of where USEPA has approved MatCon at a similar site, i.e. to close a CERCLA municipal waste landfill site.

Response

CRA has revised the discussion with respect to slope and has removed the implication that Ohio EPA and USEPA have approved MatCon on similar sites.

Ohio EPA Comment No. 84

i) Section 4.2.2, p. 81, last paragraph. This paragraph is not relevant to ARARs. Please delete.



Response

CRA has revised as requested.

SECTIONS 4.2.2 & 4.2.3, LONG-TERM EFFECTIVENESS AND PERMANENCE, P. 82 & P. 85.

Ohio EPA Comment No. 85

a) This criterion involves a discussion of the adequacy and reliability of the components of the alternative, including LFG, soil vapor, and surface water controls, monitoring, institutional controls, fences, etc. Long-term effectiveness also includes the ability of the cap(s) to maintain its integrity. Please add these considerations to the discussion in this section for both alternatives.

Response

CRA has revised this section to discuss the ability for both Alternative 2 and Alternative 3 to maintain integrity and long-term effectiveness.

Ohio EPA Comment No. 86

b) It is stated in the text that both Alternative 2 and Alternative 3 will have a high degree of permanence. However, irreversible treatment is needed for a high level of permanence. As presented in the Report, both alternatives rely on containment and currently do not include any treatment components. Unacceptable exposures can occur if containment remedies fail, and hence they do not rate well when considering permanence. Please revise the text.

Response

CRA has revised to state that the alternatives will have a moderately high level of performance. CRA has also revised the text throughout the document to include discussion of the common component between the two alternatives to address hot spots Containing Principal Threat Waste (i.e., waste that warrants excavation or treatment consistent with USEPA policy and guidance (e.g., free-phase LNAPL, drums containing liquid or hazardous waste); Other Principal Threat Waste that Meets the Conditions for Warranting Excavation or Treatment Indicated in USEPA 1993).



Ohio EPA Comment No. 87

c) According to the NCP, assessment of this criterion also includes consideration of the “magnitude of residual risk remaining from untreated waste or treatment residuals remaining at the conclusion of the remedial activities.” Given that no treatment is included in any of the alternatives, the residual risk of the untreated waste would not change for either of the alternatives.

Response

See Response to Comment No. 86. CRA has revised text throughout the document to include discussion of the common component between the two alternatives to address hot spots Containing Principal Threat Waste (i.e., waste that warrants excavation or treatment consistent with USEPA policy and guidance (e.g., free-phase LNAPL, drums containing liquid or hazardous waste); Other Principal Threat Waste that Meets the Conditions for Warranting Excavation or Treatment Indicated in USEPA 1993).

CRA concurs that the residual risk of the untreated low level threat waste would not change for either of the alternatives.

Ohio EPA Comment No. 88

d) Section 4.2.2, p. 82, 1st paragraph, last sentence. The text states that the closure requirements “conservatively address relevant exposure pathways.” No basis is presented for this judgment. Please delete this text. This is the ARAR compliant alternative, and is the minimum protection required by ARARs.

Response

CRA has revised as requested.

Ohio EPA Comment No. 89

e) Section 4.2.3, p. 85, 2nd paragraph, last sentence. The text states that the cap design would eliminate relevant exposure pathways. Provide more specific detail on the exposure pathways controlled (not eliminated) by the cap.

Response

CRA has revised as requested.



Ohio EPA Comment No. 90

f) Section 4.2.2, p. 82, 2nd paragraph. Add to this section mention that the MatCon cap has a limited life-span and will require replacement.

Response

CRA has indicated that cracks may form in the MatCon cap over time; however, CRA also indicated that cracks at the surface are more readily identified and addressed than in a HDPE layer. CRA has also further expanded this discussion to include the maintenance requirements associated with a SW Cap. This ensures that there is a fair and consistent comparison between the two caps.

SECTIONS 4.2.2 & 4.2.3, REDUCTION OF TOXICITY, MOBILITY,
OR VOLUME THROUGH TREATMENT, P. 82 & P. 85.

Ohio EPA Comment No. 91

As presented, neither alternative includes any treatment. Revise the text in both sections to acknowledge that no treatment is included and hence neither alternative reduces the toxicity, mobility, or volume of the hazardous substances using treatment.

Response

See Response to Comment No. 86.

SECTIONS 4.2.2 & 4.2.3, SHORT-TERM EFFECTIVENESS, P. 82 & 83 AND P. 85 & 86.

Ohio EPA Comment No. 92

a) For both alternatives, a reduction in erosion control during construction is identified as a potential environmental impact of the remedial actions. Please add to the text in both sections, a discussion of the effectiveness and reliability of mitigative measures, such as those required by the solid waste management and storm water management ARARs.



Response

CRA has added discussion to both alternatives to generally discuss the temporary controls that would be implemented during active remediation and the permanent controls that would be implemented following completion of remediation.

Ohio EPA Comment No. 93

b) For both alternatives, an increase in infiltration is identified as a potential environmental impact of the remedial actions because of the removal of soil cover and it is suggested that it will be minimized following the establishment of the vegetation on the cap. These are not evapotranspiration caps. Infiltration will primarily be controlled by the barrier layers once construction is completed. Please revise the text in both sections.

Response

CRA has revised as requested.

Ohio EPA Comment No. 94

c) The text states, under Alternative 3 that the Small and Large Ponds will be destroyed, however, this is not mentioned in Alternative 2 which will have the same remedial action over the same area. Please revise the text in Alternative 2.

Response

CRA has revised as requested.

Ohio EPA Comment No. 95

d) In both sections, separate the discussions of short-term risks to environment and short-term risks to the community. Discuss the measures that will be taken to mitigate short-term risks in both sections.

Response

CRA has separated this discussion as requested and has generally discussed measures that will be implemented to mitigate the short-term risks.



Ohio EPA Comment No. 96

e) In both sections, risks are associated with emissions from haul trucks and construction equipment and the statement is made that "these risks cannot be readily mitigated." These risks can be readily mitigated using green remediation best management practices for clean fuel & emission technologies. As also stated in other comments, these green remediation technologies should be incorporated into the alternatives.

Response

CRA has included discussion of the risks associated with emissions from haul trucks. Although clean fuels and emission technologies can reduce the short-term risks, these practices will not mitigate the risks associated with the large number of haul trucks and equipment that will be on Site during remediation. Therefore, although CRA has indicated that green remediation technologies would be incorporated to the extent possible, these measures only reduce but do not significantly mitigate the risks for either alternative.

Ohio EPA Comment No. 97

f) In both sections, discuss the short-term risks to the workers and patrons of the on-Site businesses during construction. Discuss what monitoring and mitigative measures will be necessary to protect on-Site business workers and patrons. For example, discuss how the areas surrounding the businesses can be safely excavated in order to install the MatCon cap at the approximate existing grade. If the businesses will need to close temporarily during construction of some components of the alternatives, please identify which components and the expected duration of the closure(s).

Response

CRA has revised as requested.

Ohio EPA Comment No. 98

g) In both sections, the time until protection is achieved and the time until RAOs are met is not discussed. Please provide a timeframe for both achieving protection and meeting RAOs.

Response

At the beginning of both Section 4.2.2 and 4.2.3, where RAOs are discussed, CRA has provided an approximate timeframe for addressing the RAO.



Ohio EPA Comment No. 99

h) Economic considerations are not part of short-term effectiveness. Please remove the last sentence of page 85 about the relocation of the on-Site businesses from the Alternative 3 discussion.

Response

CRA has revised as requested.

SECTION 4.2.2 AND SECTION 4.2.3, IMPLEMENTABILITY, P. 83 & P. 86.

Ohio EPA Comment No. 100

a) To both sections, add a discussion of administrative implementability.

Response

CRA has revised as requested.

Ohio EPA Comment No. 101

b) On page 83, for Alternative 2, the text states that "the constructed features of this alternative are common to many remediation projects." The use of MatCon specialty asphalt to cap part of a landfill is not common. Please revise accordingly.

Response

CRA has added to this discussion challenges that may be presented through the implementation of MatCon. However, CRA has also clearly stated that the techniques required for the installation of a MatCon cap are not technically challenging or especially onerous.

Ohio EPA Comment No. 102

c) To the Alternative 2 discussion on page 83, add the technical difficulty of constructing the MatCon cap around and sealing the cap to the existing businesses. Discuss also the difficulties involved with



constructing the caps with on-Site business workers and patrons in close proximity to construction activities. Discuss if the businesses will need to temporarily close at any point, and if so, for how long.

Response

CRA has added to this discussion some technical difficulties of constructing the MatCon Cap around the existing businesses.

Ohio EPA Comment No. 103

d) Alternative 3, page 86, 3rd paragraph, 1st and 2nd sentences. The requirements for Alternative 3 are not political or economic. Revise the first sentence to read: "This alternative includes a cap over the entire OU-1 presumptive remedy area which complies with OAC 3745-27." Delete "Therefore" from the beginning of the second sentence.

Response

CRA has revised as requested.

Ohio EPA Comment No. 104

e) In both sections the statement is made that "the effectiveness of the features associated with this alternative is easily monitored." Please provide the details of the features and how they will be monitored.

Response

CRA has included discussion of the effectiveness of the cap, including general details of a cap monitoring program.

Ohio EPA Comment No. 105

f) For Alternative 2, MatCon is specialty asphalt produced by one manufacturer. In this section, discuss the availability of this product for a project of this size in this area of the country. Discuss other technical challenges for the product, for example any weather or seasonal restrictions for installation and the technical issues associated with installing the MatCon in close proximity to the buildings and sealing it to the buildings.



Response

See CRA Response to Comment No. 101. CRA has added to this discussion challenges that may be presented through the implementation of MatCon. However, CRA has also clearly stated that the techniques required for the installation of a MatCon cap are not technically challenging or especially onerous.

SECTION 4.2.2 AND SECTION 4.2.3, COST, P. 83 AND P. 86 & 87

Ohio EPA Comment No. 106

a) Site clearing is listed as a cost for both alternatives and the same area is cleared with the exception of where business structures are located that will be retained. Delete the word "substantial" from the wording for Alternative 3, on page 86, last paragraph, in the fourth sentence.

Response

CRA has revised as requested. CRA has also included demolition costs to Alternative 3 that would be required for implementation. Given the tremendous uncertainty associated with whether businesses could or would relocate, these costs are not included in the cost estimate for Alternative 3 but would likely be in the millions of dollars.

Ohio EPA Comment No. 107

b) On page 86, last paragraph, in the fifth sentence, the text states, under Alternative 3 that the Small and Large Ponds will need to be backfilled to grade, however, this is not mentioned in Alternative 2, which will have the same remedial action over the same area. Please revise the text in Alternative 2.

Response

CRA has revised as requested.

Ohio EPA Comment No. 108

c) Earlier in the alternative analysis it is stated that wetland mitigation will be necessary for both alternatives. Add the cost of wetland mitigation to the costs of the remedial alternatives.



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Response

Costs for wetland mitigation have been included in both Alternative 2 and Alternative 3.

Ohio EPA Comment No. 109

d) The costs should be adjusted for both Alternative 2 and 3 using a 3% slope for the solid waste caps and a 1.5% slope for the MatCon cap.

Response

CRA has revised as requested.

Ohio EPA Comment No. 110

e) For both alternatives, add the costs of maintaining fence and signage that will be necessary to control access due to the passive LFG vents.

Response

CRA has revised as requested.

Ohio EPA Comment No. 111

f) P. 87, 2nd full paragraph, 2nd sentence. The costs for the "permanent loss" of any future use of the Site are not relevant to this criterion. Delete this sentence.

Response

CRA has revised as requested.

COMPARATIVE ANALYSIS OF ALTERNATIVES

Ohio EPA Comment No. 112

Section 4.3 -- Comparative Analysis, p. 87. The above comments on the individual analyses of the alternatives also apply to the comparative analysis. Once the comments on the individual analyses are



incorporated, the comparative analysis needs to be redone based on the revised individual analyses. The current comparative analysis, like the current individual analyses, is overly simplistic and does not allow the alternatives to be compared using the remedy evaluation criteria in the NCP. Additional comments on the comparative analysis as currently presented follow.

Response

CRA has revised as requested.

Ohio EPA Comment No. 113

Section 4.3 -- Comparative Analysis, p. 87, 3rd full paragraph, 1st sentence. The intention of the presumptive remedy of containment for the low level threat waste such as municipal waste at landfills includes addressing risks other than just direct contact. Other exposure pathways the OU1 remedy must address include exposure to contaminated surface leachate, exposure to landfill gas, on-Site exposure via vapor intrusion, potable water exposure (at Valley Asphalt), and any other potential exposure pathways associated with the OU-1 RAOs. Note also that the presumptive remedy is not containment for potential hot spots areas and that there is an RAO for addressing potential hot spots. Revise this paragraph accordingly. (Ohio EPA understands that the December 2010 dispute resolution resulted in the fourth general pathway addressed by the presumptive remedy, exposure to contaminated ground water, is to be deferred to OU2 with the exception of the Valley Asphalt potable water wells.)

Response

CRA has compared the alternatives based on the ability to address the RAOs associated with OU1. CRA has evaluated each alternative based on each RAO individually and also has provided a summary considering all RAOs as a whole.

Ohio EPA Comment No. 114

Section 4.3 -- Comparative Analysis, p. 87, 3rd full paragraph, 2nd sentence. The text lists the type of cap as the largest difference between the alternatives. Please add more detail on the other differences between the alternatives such as the complexities involved with implementing a remedy that allows existing businesses on top of the landfill to remain in place.

Response

CRA has revised as requested.



Ohio EPA Comment No. 115

Section 4.3.1 – Overall Protection of Human Health and the Environment, p. 87, 4th full paragraph. The second sentence states that direct contact exposure is the relevant exposure pathway. As discussed above, there are other relevant exposure pathways for OU1 based on the OU-1 RAOs. Please expand the comparative analysis of “overall protection of human health and the environment” to describe how each of the RAOs are met how the alternatives address each of the potential threats and exposure pathways (not just direct contact). Note that overall protection also requires an evaluation of a composite of factors assessed under other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs, and include a comparative analysis of these factors in this assessment. See also comments on overall protection provided for the individual analyses.

Response

CRA has revised as requested.

Ohio EPA Comment No. 116

Section 4.3.1 – Overall Protection of Human Health and the Environment, p. 87, Protection of Human Health and the Environment table. Revise this summary table to incorporate the revised analysis.

Response

CRA has revised as requested based on an assessment compared to each individual RAO.

Ohio EPA Comment No. 117

Section 4.3.1 – Overall Protection of Human Health and the Environment, p. 88, 1st paragraph. Please provide detail to substantiate the conclusion that Alternatives 2 and 3 would not “pose any unacceptable short-term or cross-media impacts.” For example, discuss the short-term risks of constructing Alternative 2 around operating business, and the cross-media impacts of venting untreated landfill gas (a greenhouse gas) and soil vapors from passive vents, including the need to restrict access with fences and signage due to passive venting. Explain how this can be accomplished (necessary mitigation measures) while maintaining the businesses in the MatCon cap portion of Alternative 2.



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Reference No. 038443-12

Response

CRA has provided additional detail, including an assessment of each alternative compared to the RAOs to substantiate the conclusion that Alternatives 2 and 3 would not pose any unacceptable short-term or cross media impacts.

Ohio EPA Comment No. 118

Section 4.3.2 – Compliance with ARARs, p. 88, 2nd paragraph, 1st sentence. Please delete. Alternatives are required to comply with the substantive requirements of ARARs for actions conducted entirely on-Site, and all requirements (including permitting) for activities or discharges or treatment which occurs off-Site. NCP waivers must be justified when ARARs are not complied with.

Response

Concur. CRA has revised as requested.

Ohio EPA Comment No. 119

Section 4.3.2 – Compliance with ARARs, p.88, Compliance with ARARs table. Delete variances and slope from the “moderate” category. Meeting the substantive requirements of obtaining a variance under Ohio’s solid waste rules complies with ARARs. Alternative 2 rates “Moderate” as it requires NCP waivers and Alternative 3 rates “High” as it complies with ARARs.

Response

CRA has revised this section thoroughly and has revised to address this comment accordingly.

Ohio EPA Comment No. 120

Section 4.3.2 – Compliance with ARARs, p. 88, 3rd paragraph. Correct the first sentence. NCP ARAR waivers can be justified under the circumstances identified in the NCP, not variances under Ohio’s solid waste laws.

Response

CRA has revised as requested.



Ohio EPA Comment No. 121

Section 4.3.2 – Compliance with ARARs, p. 89, 1st full paragraph. Please delete this paragraph discussing the direct contact exposure pathway. The NCP waivers needed for the Matcon cap must be based on a demonstration of meeting an equivalent (or better) standard of performance than that required by the specific ARAR being waived.

Response

CRA has revised as requested.

Ohio EPA Comment No. 122

Section 4.3.2 – Compliance with ARARs, p. 89, 2nd full paragraph. Delete this paragraph. Variances under Ohio's solid waste rules are part of the rules, not an inconsistent application of them. Also, it cannot be demonstrated that Ohio has inconsistently applied the ARARs applicable to this Site. No "inconsistent application" ARAR waivers are being sought for this Site and none can be justified.

Response

CRA has revised as requested.

Ohio EPA Comment No. 123

Section 4.3.2 – Compliance with ARARs, p. 89, 3rd paragraph. Again, separate the issues of non-compliance with ARARs requiring NCP waivers from the discussion of ARAR compliant variances under Ohio's solid waste regulations. Also, there has been no evaluation of major and minor ARARs, so delete the reference to "minor" variances or waivers.

Response

CRA has revised as requested.



Ohio EPA Comment No. 124

Section 4.3.2 – Compliance with ARARs, p. 89, 4th paragraph. Again, separate the issues of ARAR waivers and rule variances. NCP waivers for the MatCon cap will not be “justified in order to preserve the active businesses present on Site.” The waivers can only be justified by a demonstration of equivalent performance with respect to the ARAR being waived. Also note that preserving the businesses currently located on top of the landfill is not a justification for a waiver or variance. The desire to preserve the existing businesses maybe the impetus for seeking a NCP waiver or variance under Ohio’s solid waste rules, but it is not a justification for the waiver or variance sought. Revise this paragraph to address these issues.

Response

CRA has revised as requested.

Ohio EPA Comment No. 125

Section 4.3.2 – Compliance with ARARs, p. 89, last paragraph. Please delete this paragraph and instead discuss how the alternatives will incorporate green remediation strategies such as clean diesel technology and management of greenhouse gases. See above comments on the individual analyses for this criterion.

Response

CRA has revised as requested.

Ohio EPA Comment No. 126

Section 4.3.3 – Long-term Effectiveness and Permanence, p. 90, 1st paragraph of section. The statement is made in the first paragraph that “the most important risk associated with the contaminants at the Site is due to direct contact with the waste and fill,” and in the next paragraph it is stated that “direct contact is the primary determining factor for long-term effectiveness.” This is incorrect. Revise the comparative analysis to compare and contrast the considerations identified for this criterion in the NCP and in the comments above on the individual analyses, including an evaluation of the “magnitude of residual risk” associated with the untreated waste. Revise the summary table to reflect the revised text.

Response

CRA has revised this section substantially and has addressed Ohio EPA’s comment.



Ohio EPA Comment No. 127

Section 4.3.3 – Long-term Effectiveness and Permanence, p. 90, last paragraph. No technical or programmatic justification is presented for the 90 – 99% criteria for a Moderate rating and less than 90% for a Low. Please delete these criteria from this discussion. One metric that could be used to compare the alternatives that has been used at other sites is the number of gallons of leachate generated each year due to infiltration through the cap for each alternative. In the summary table on page 91, replace the “percentage of precipitation shed” with the gallons of leachate generated each year due to infiltration through the cap.

Response

It is unclear why the metric is incorrect when presented as a percentage. The percentage is based on a modeled estimate of the volume of water shed from the cap. Presenting these values as percentages allows for a more simple relative comparison between the three alternatives. The number of gallons of leachate generated each year is a direct function of the percentage of precipitation shed, i.e., the two are essentially two measures of the same thing. Given that the leachate will not be collected or treated (except as part of any groundwater remedy for OU2), the gallons of leachate generated have little relevance to the remedy selection process.

Ohio EPA Comment No. 128

Section 4.3.3 – Long-term Effectiveness and Permanence, p. 91, summary table. “Adequacy and reliability of controls such as containment systems and institutional controls” is another factor that should be considered in evaluating long-term effectiveness. Revise the summary table to more comprehensively evaluate how the alternatives compare on this standard. Note that the ARAR compliant solid waste cap is a dual barrier system and the MatCon cap employs a single barrier system. Note that the ARAR compliant solid waste cap has a “self-healing” layer (the 18” of compacted clay) and the MatCon cap does not. The integrity of the MatCon cap is more sensitive to any future waste settlement than the soil waste cap as it does not contain a self-healing barrier layer and because at a 1.5% slope, there is very little leeway for settlement with respect to maintaining positive drainage and avoiding ponding of precipitation on the landfill. Note also with respect to the direct contact issue, the solid waste cap provides approximately four feet of cap thickness between the waste and the opportunity for direct contact with the waste, and the Matcon cap provides approximately one foot of cap thickness. Any deeper penetration of the Matcon cap can potentially lead to direct contact with the waste. Explain that for these reasons and others (life-span, etc.) the MatCon cap will require more monitoring and more frequent repairs than the ARAR compliant solid waste cap. Note that the conclusion that the two alternatives provide comparable long-term effectiveness and permanence can only be made by assuming a rigorous inspection and maintenance program for the MatCon component of the Alternative 2 cap.



Response

CRA has expanded the discussion substantially to discuss the long-term effectiveness of the caps based on cap construction and the expected lifespan of the cap. With respect to thickness, the MatCon Cap is approximately 1-foot in thickness; however, it effectively provides a near impervious barrier between surficial receptors that is equivalent (based on HELP modeling). Therefore, the thickness of the barrier is irrelevant.

CRA has also included discussion of the maintenance measures that would be required to ensure the long-term effectiveness of the cap.

Ohio EPA Comment No. 129

Section 4.3.3 – Long-term Effectiveness and Permanence, p. 91, 1st full paragraph. The text states that “both Alternative 2 and Alternative 3 would employ similar institutional controls, engineering controls, and monitoring program.” This is inaccurate since Alternative 2 includes the MatCon cap and the on-Site businesses. Both of these components will lead to different and likely more extensive maintenance, monitoring, and replacement requirements than the solid waste cap. The institutional controls will also vary, minimally in their scope. Revise to discuss these aspects. Revise the last sentence to read: “With respect to addressing impacts to shallow groundwater due to infiltration, soil gas, and LFG, all active remedial alternatives are comparable with respect to the long-term effectiveness.” The alternatives do not currently include any irreversible treatment and so the level of long-term protection is not “high” as exposure to the residual risk associated with the untreated waste can occur if the containment remedies fail.

Response

CRA has revised as requested.

Ohio EPA Comment No. 130

Section 4.3.4 – Reduction of Toxicity, Mobility, or Volume through Treatment, p. 91. The alternatives as currently presented do not include any treatment; therefore there is no reduction of toxicity, mobility, or volume of the hazardous substances present at the Site through treatment. See above comments on the individual analyses for this criterion. Further, passive venting is not treatment and it does not reduce the volume of LFG through treatment. It simply transfers the LFG from the subsurface environment to the atmosphere, and hence is in reality inter-media transfer of untreated Site-related contamination. Delete the second half of the first paragraph and the second paragraph of this section. Revise the rest of the text



in this section to state that none of the alternatives involve treatment of any hazardous substances and hence there is no reduction of toxicity, mobility, or volume of hazardous substances at the Site due to treatment. In the summary table, all alternatives should be rated as "None."

Response

As an example, trichloroethylene (TCE) under anaerobic and, to a lesser degree, aerobic conditions, will undergo a natural degradation process. The typical degradation pathway is as follows:

TCE > cis-1,2-DCE³ > vinyl chloride > ethene > carbon dioxide.

Therefore, with respect to soil vapors, there is some reduction in the toxicity of contaminants even under the "No Action" scenario.

CRA has revised the text throughout the report to indicate that where applicable, hot spots will be directly addressed through treatment.

Ohio EPA Comment No. 131

Section 4.3.5 – Short-term Effectiveness, p. 92. The criterion of short-term effectiveness is more than the duration of time within which the alternative can be completed; it is the time to achieve protection and the time to meet RAOs, among other things. See above comments on the individual analyses for this criterion and incorporate into the comparative analysis.

Response

CRA has expanded this discussion to include other short-term risks and to discuss the short-term risks to employees and businesses associated with both alternatives.

Ohio EPA Comment No. 132

Section 4.3.5 – Short-term Effectiveness, pp. 92 and 93. See Comment 99. Remove all discussions, in the text and in the table, about economic impact of the businesses having to relocate from the Site to implement Alternative 3. If anything, Alternative 2, which leaves the businesses in place during remediation, rates lower under short-term effectiveness due to the immediate proximity of human

³ 1,1-DCE and trans-1,2-DCE are also produced by the degradation of TCE but typically in substantially smaller quantities.



receptors during construction (business employees and patrons) and the resultant additional monitoring and safeguards required to mitigate risks during construction.

Response

CRA disagrees with this requested revision. Forcing businesses to close and relocate could have substantial adverse effects on their operations and these effects should be discussed.

Ohio EPA Comment No. 133

Section 4.3.5 – Short-term Effectiveness, p. 92 and 93. The discussion of the short-term risks for Alternative 2 in this section did not include the risks associated with constructing the MatCon cap around operating businesses, including the need to excavate waste to maintain grade for the Matcon cap. These risks should be added to the discussion and to the summary table evaluation.

Response

CRA has revised as requested.

Ohio EPA Comment No. 134

Section 4.3.6 Implementability, p. 93, 3rd full paragraph, 1st sentence. Implementability does not include the political and economic impacts on the businesses. See above comments on the individual analyses regarding this criterion. Delete the second half of the first sentence of this paragraph and replace it with the administrative feasibility of obtaining necessary approvals, including permits for any off-site actions.

Response

CRA has revised as requested.

Ohio EPA Comment No. 135

Section 4.3.6 Implementability, p. 93, 3rd full paragraph, 2nd sentence. This sentence mentions some minor expected technical challenges. Describe the technical challenges for each alternative and discuss them in terms of implementability.



Response

CRA has revised as requested.

Ohio EPA Comment No. 136

Section 4.3.6 Implementability, p. 93, last paragraph, and p. 94, 3rd paragraph. The process of relocating businesses, while it will take time, may have a Moderate effect on administrative Implementability, but it is not unimplementable, and should not be rated Low. Alternative 3, a solid waste cap over the entire OU-1 waste area, would rate High for technical feasibility since it uses proven conventional technologies with locally available materials. Also, using the rationale in this paragraph, Alternative 2 should be rated as Moderate because of the technical challenges of constructing the MatCon cap around operating businesses, sealing the cap to buildings and sealing the two caps together, the availability of the materials, and possible weather restrictions. See Comments 97 and 100. In addition, the process of obtaining the waiver for the alternative cap will affect the administrative implementability of Alternative 2.

Response

As discussed in Response to Comment No. 101, CRA has added to this discussion challenges that may be presented through the implementation of MatCon. However, CRA has also clearly stated that the techniques required for the installation of a MatCon cap are not technically challenging or especially onerous.

Ohio EPA Comment No. 137

Section 4.3.7 – Cost, p. 94. Remove from this section all discussion of cost-effectiveness. Cost-effectiveness is not part of the cost criteria in the detailed analysis of remedial alternatives in a feasibility study. It will be considered by USEPA during remedy selection. Delete the references to 40 CFR Sec. 300.430(f)(ii)(D) and refer to 40 CFR Sec. 300.430(e)(9)(iii)(G). In this section, the alternatives should be evaluated by comparing the overall costs of the remedial alternatives.

Response

CRA disagrees with this requested revision. Applying 40 CFR Sec. 300.430(f)(ii)(D) allows a means of normalizing the costs to assess the overall effectiveness of the remedy per dollar, rather than simply comparing the costs as a whole. Simply comparing the costs of the remedy could allow for less effective remedies to score higher in this category based on cost alone. Further, Task 7.1.1 of the SOW states that



*The Respondents shall apply the nine evaluation criteria to the assembled remedial alternatives to ensure that the selected remedial alternative will protect human health and the environment and meet remedial action objectives; will comply with, or include a waiver of, ARARs; **will be cost-effective** [emphasis added]; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and will address the statutory preference for treatment as a principal element.*

Therefore, an evaluation of the cost-effectiveness of an alternative is an appropriate and required element of the detailed evaluation of alternatives.

Ohio EPA Comment No. 138

Section 4.3.7 – Cost, p. 94. The costs for the remedial alternatives should be revised in response to Comments 106 through 111. The cost part of the comparative analysis should be completed once the cost tables are revised.

Response

CRA has revised as requested.

Ohio EPA Comment No. 139

Section 5.0 -- Summary, pp. 96 through 98. This section will require revision to incorporate the revised individual and comparative analyses of alternatives. The following comments are offered on the Summary as provided in the Report.

Response

CRA has revised as requested.

Ohio EPA Comment No. 140

Section 5.0, Summary, p.96, first sentence. In this sentence, specify that not all components of the presumptive remedy for CERCLA Municipal Landfill Sites are being implemented as part of OU1. The presumptive remedy will not be completed until the components of source area ground-water control and leachate collection and treatment are addressed in OU2.



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Reference No. 038443-12

Response

CRA has revised as requested.

Ohio EPA Comment No. 141

Section 5.0 -- Summary, p. 96, 2nd sentence. Again, clarify that this is the landfill cap portion of the presumptive remedy, not the whole source containment presumptive remedy.

Response

CRA has revised as requested.

Ohio EPA Comment No. 142

Section 5.0 -- Summary, p. 96, 1st bullet. Add the other risks/pathways addressed in the OU-1 RAOs such as LFG, soil vapors, and surface leachate, and how all of the RAOs are addressed by the Alternatives.

Response

CRA has included each individual RAO. Please refer to Sections 4.2.2, 4.2.3, and 4.3 for detailed discussion of how the RAOs will be addressed.

Ohio EPA Comment No. 143

Section 5.0 -- Summary, p. 96, 4th bullet. Please delete this bullet. The presumptive remedy guidance streamlines the RI/FS process, not the remedy itself.

Response

CRA has revised as requested.



Ohio EPA Comment No. 144

Section 5.0 -- Summary, p. 96, Alternative 1. See Comment 42 regarding the description of Alternative 1.

Response

Comment 42 is a generic comment related to the streamlined analysis of alternatives. It is unclear to CRA as to how Comment 42 is connected to Alternative 1. Therefore, CRA has not revised as requested.

Ohio EPA Comment No. 145

Section 5.0 – Summary, p. 96, last bullet. Delete. See comments on green remediation provided above.

Response

While CRA acknowledges that the Principles for Green Remediation do not directly include post-remediation land use, CRA disagrees with the removal of this bullet. The ability for the Site to be used productively following remediation is an important consideration in the development of a remedy.

SPECIFIC COMMENTS ON ARARS FOR TABLES 2.1, 2.2, AND 2.3,
AND THE TABLE IN APPENDIX E

Ohio EPA Comment No. 146

ARAR Tables. Most importantly, reiterating General ARAR Comment #1, for each ARAR, list for each remedial alternative, the affected remedial component and how will the component meet or not meet which specific rule or criteria of the ARAR or TBC.

Response

CRA has revised as requested.



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Reference No. 038443-12

Ohio EPA Comment No. 147

ARAR Tables. The following state rules and regulations that are listed as "relevant and appropriate" are applicable. Please change the designation of these ARARs within the revised comprehensive ARAR table as requested in General ARAR Comment #1

OAC 3745-15
OAC 3745-17
OAC 3745-21
OAC 3745-39
OAC 3745-50
OAC 3745-51
OAC 3745-52
OAC 3745-53
OAC 3745-270
ORC 3734.02(H)
ORC 3734.041
ORC 3767.13
ORC 6111
OAC 3745-1

Response

CRA has revised as requested.

Ohio EPA Comment No. 148

ARAR Tables. Please remove from the list of ARARs the following state regulations as they do not pertain to the South Dayton Dump and Landfill:

ORC 3714.13
OAC 3745-29
OAC 3745-30
OAC 3745-400

Response

CRA has revised as requested.



Ohio EPA Comment No. 149

ARAR Tables. The following guidances which are listed as relevant and appropriate should be listed as "to be considered."

A Guide to Principal Threat and Low Level Threat Wastes (OSWER Directive 9380.3-06S)

USEPA – Reference Doses

USEPA – Cancer Slope Factors

USEPA – Region 9 Preliminary Remediation Goals

Guidance on Remedial Action for Superfund Sites with PCB Contamination (OSWER Directive 9355.4-01, EPA 540/G-90/007, August 1990)

Response

CRA has revised as requested.

Ohio EPA Comment No. 150

ARAR Tables. The descriptions of remedial actions at the Site are inconsistent with the Appendix E table. Under Chemical-Specific ARARs, 40 CFR Part 261 (which is equivalent to OAC 3745-51), it is stated that "any hazardous materials generated during intrusive work will be disposed off-Site." Then under, 40 CFR Part 262 (which is equivalent to OAC 3745-52) and 40 CFR Part 268 (which is equivalent to OAC 3745-270), it is stated that any hazardous materials generated during intrusive work will be disposed off-Site, or treated and disposed on-Site. Similar contradictory language appears later in the table under the discussion of state hazardous waste regulations. Please revisit the anticipated site actions and revise the table text to be consistent with the planned actions.

Response

CRA has revised as requested.

Ohio EPA Comment No. 151

ARAR Tables. The analyses for the federal RCRA regulations and the state hazardous waste rules repeatedly include the term "hazardous materials." These rules apply to hazardous waste, so replace the term "hazardous materials" with the term "hazardous waste."



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Reference No. 038443-12

Response

CRA has revised as requested.

Ohio EPA Comment No. 152

ARAR Tables. The ARAR analyses for the state hazardous waste regulations states that the remediation alternatives do not require generation of hazardous waste. However, excavation of material which will be necessary to install the caps may very well generate hazardous waste. Any waste generated must be evaluated according to the regulations to determine if it is hazardous waste.

Response

CRA has revised as requested.

Ohio EPA Comment No. 153

ARAR Tables, 40 CFR Part 403 (OAC 3745-36). Please describe what part of the remedial alternative would include a discharge of wastewater to a POTW or delete this ARAR from the table.

Response

CRA has revised as requested.

Ohio EPA Comment No. 154

ARAR Tables, USEPA Reference Doses, Cancer Slope Factors, and Region 9 Preliminary Remediation Goals. The soil gas pathway (vapor intrusion) will not be addressed "by eliminating direct contact exposure pathway through capping." Please revise or delete this statement.

Response

CRA has revised as requested.



Ohio EPA Comment No. 155

ARAR Tables, A Guide to Principal Threat and Low Level Threat Wastes. Please remove the statement "There is not substantial quantities of principal threat waste that will require direct treatment." This statement is not supported by the amount of available site data. As has been discussed in comments from USEPA on the OU1 report, there are potential hot spot areas that need further investigation. The result of that investigation may be the relocation, removal, or in-situ remediation of waste.

Response

CRA has revised as requested.

Ohio EPA Comment No. 156

ARAR Tables, OAC 3745-17 These regulations, listed under Chemical-Specific ARARs, are applicable to the remedial actions under evaluation, and several sections of these regulations, OAC 3745-17-02 and 3745-17-05, are listed under Action-Specific ARARS. In addition, sections OAC 3745-17-07 and 3745-17-08 are also applicable.

Response

CRA has revised as requested.

Ohio EPA Comment No. 157

ARAR Tables, OAC 3745-21 It is not clear how these regulations apply to the circumstances listed in the analysis. In the revised analysis, discuss how these regulations are also applicable to the landfill gas vents.

Response

CRA has revised as requested.

Ohio EPA Comment No. 158

ARAR Tables, Clean Water Act (ORC 6111) The table states there will be no discharges to surface water. These laws also apply to storm water discharges. Please revise the analysis to also address storm water discharges.



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Reference No. 038443-12

Response

CRA has revised as requested.

Ohio EPA Comment No. 159

ARAR Tables, Water Quality ARARs. In the analysis of several water quality regulations cited in the ARAR tables, there is differentiation between Alternative 2 and Alternative 3 stating that the Quarry Pond may be drained prior to capping for Alternative 3. The extent of the solid waste cap is the same for both alternatives which specify that the unsubmerged north face of the Quarry Pond will be included in the cap. Please explain why the difference in design and why the rules would be applied differently to the two alternatives.

Response

The Quarry Pond will be addressed as part of OU2. All discussion of measures applicable to the Quarry Pond has been removed.

Ohio EPA Comment No. 160

ARAR Tables, 40 CFR Part 81.34, and the state equivalent. This regulation is out-of-date and should be removed from the table since Montgomery County is in attainment for ozone.

Response

CRA has revised as requested.

Ohio EPA Comment No. 161

ARAR Tables, ORC 5301. Please revise the analysis of this rule. An environmental covenant is an institutional control and would be part of the remedy. Also it is not clear what is meant by "as may be needed in future." Please clarify.

Response

CRA has revised as requested.



Ohio EPA Comment No. 162

ARAR Tables, USEPA's Superfund Green Remediation Strategy and USEPA's Principles for Green Remediation. Whether the site is a brownfield and its continued use is not relevant to the green remediation strategy. In the revised ARAR analysis, discuss how guidance is relevant to other more appropriate strategies, such as clean diesel for trucks and heavy equipment at the Site.

Response

CRA has revised as requested.

Ohio EPA Comment No. 163

ARAR Tables, ORC 3701.344-.347 and OAC 3701-28. Since there is public water supply well on-Site at the Valley Asphalt Plant, these Ohio Department of Health rules and regulations are applicable as ARARs. Please add them to the ARAR analysis table.

Response

Although there is a domestic water supply well at Valley Asphalt, it is not used as a source of potable water. Therefore, while appropriate and relevant, this is not an applicable ARAR.

TABLE 2.4

Ohio EPA Comment No. 164

Section 2.3 and 2.4 of the Streamlined OU-1 RI/FS Report (Report). Table 2.4 needs to be revised once Section 2.3 and 2.4 are revised to be consistent with the guidance appended to the ASAO. The following comments are offered on Table 2.4 as currently provided in the Report. Due to time constraints, Ohio EPA was not able to address in the comments below all of the issues in Table 2.4 as presented in the Report. We expect revision of Table 2.4 following revisions of Sections 2.3 and 2.4 in accordance with the above comments will address any remaining issues not addressed in the comments below.

Response

CRA has revised as requested.



Ohio EPA Comment No. 165

Table 2.4, Waste and Fill: The table needs to distinguish between low level threat waste and principal threat waste. As presented, collection and treatment technologies appropriate for principal threat waste are mixed in with containment technologies for low level threat waste. The technologies and process options for the low level threat waste should be based on containment and the process options for principal threat waste should be based on removal or treatment.

Response

CRA has revised as requested.

Ohio EPA Comment No. 166

Table 2.4, Waste and Fill, No Action, Implementability: Delete "Not acceptable to Federal and State governments" and replace with "Not acceptable under the NCP."

Response

CRA has revised as requested.

Ohio EPA Comment No. 167

Table 2.4, Waste and Fill, General Response Actions and Remedial Technology Types: The General Response Action "Collection/Treatment" and "Other Actions" overlap. In-Situ treatment is listed under "Other Actions" when it is clearly a treatment technology. "Discharge/Disposal" is listed as an "Other Action" when discharge (of what?) may or may not require treatment depending on what is being discharged.

Response

CRA has revised as requested.

Ohio EPA Comment No. 168

Table 2.4, Waste and Fill, General Response Actions and Remedial Technology Types: "Other Actions" includes "Discharge/Disposal" with "On-Site Disposal" identified as the process option. Separate



"Discharge" from "Disposal" and consider separately. Identify what type of waste is being considered for On-Site Disposal and what is being considered for discharge. Is the discharge of (what) On-Site or Off-Site? If both On- and Off-Site disposal is being considered for whatever the waste stream is, separate the two options (on- and off-Site).

Response

CRA has revised as requested.

Ohio EPA Comment No. 169

Table 2.4, Waste and Fill, General Response Actions and Remedial Technology Types: "On-Site Disposal" is described under Effectiveness as "Not effective based on widespread presence of waste." What does this mean? Why is On-Site Disposal ineffective, and for what?

Response

CRA has revised this comment to clarify.

Ohio EPA Comment No. 170

Table 2.4, Waste and Fill, Retained or Eliminated" column: Process options are screened using the statement "Eliminated – Other process options more effective." What other process options? In what way are the unidentified other process options more effective and why?

Response

CRA has provided additional details to support these conclusions.

Ohio EPA Comment No. 171

Table 2.4, Waste and Fill General Response Actions and Remedial Technology Types: "On-Site Disposal" is eliminated based on "Other process options more effective." What other process options? How are they more effective?

Response

CRA has provided additional details to support these conclusions.



Ohio EPA Comment No. 172

Table 2.4, Waste and Fill, General Response Actions and Remedial Technology Types: Under Implementability, "On-Site Disposal" is described as "Very low level of implementability." Why? Once the type waste being considered for On-Site Disposal is identified, revise the Implementability statement to describe why On-Site Disposal has a low level of implementability if that is the case.

Response

CRA has included additional details in Section 2 to discuss the implementability of the alternatives. CRA has also provided additional details to this table, as requested.

Ohio EPA Comment No. 173

Table 2.4, Waste and Fill, General Response Actions and Remedial Technology Types:

Response

The intent of this comment is not clear.

Ohio EPA Comment No. 174

Table 2.4, Institutional Actions: Process options for institutional controls (zoning restrictions, deed/use restrictions, need to be separated out from process options for access restrictions

Response

CRA has revised as requested.

Ohio EPA Comment No. 175

Table 2.4, Waste and Fill and Landfill Gas: Collection technologies should be separated out from treatment technologies. For example, SVE is a collection technology for principal threat waste and the collected vapors may or may not require treatment depending on ARARs. The type of treatment considered for SVE is depended on the volume and concentration of soil vapor collected by the system.



Response

CRA has revised as requested.

OHIO EPA ATTACHMENT 1

Ohio EPA Comment No. 1

EPA Comment 113,

"113. Section 3.2, Screening of Alternatives, Pages 70 to 87, and Appendix C, ARAR, and Appendix D, Costs: The ARARs discussion and tables, both in the text and in Appendix C, are a confused mixture of ARARs and TBCs, none of which are held to be applicable when many are. Some ARARs are classified as TBCs when they are not. The ARARs must be separated from the TBCs (separate tables), and in the ARARs table, each ARAR must be identified as either applicable or relevant and appropriate, with an appropriate, defensible summary as to why (which must also be consistent with all previous FS comments)."

as well as Ohio EPA Comment 2,

"Currently ARARs and TBCs are jumbled together and generally misclassified and misapplied. Some ARARs are classified as TBCs; some TBCs are treated as applicable ARARs, and examples of both are included when they have nothing to do with the scope of the FS for OU 1.

- The ARARs need to be separated out from the TBCs (separate sections of the same table).*
 - The specific remedial component or process (not just the alternative #) affected by an ARAR or TCB needs to be clearly identified as does the specific rule or criteria affecting the component or process.*
 - Each ARAR needs to be classified as either applicable or relevant and appropriate with respect to the component or process. Presently none of the ARARs are held to be applicable when many are. "*
- have not been addressed.*

In this revision, many ARARs which are applicable are listed as relevant and appropriate. And guidance is listed as relevant and appropriate when it should be TBC. The summaries of how the ARARs apply or not to the alternatives are inadequate and sometimes contradictory.

Tables 2.1, 2.2, 2.3, and Appendix E need to be combined and rewritten as a comprehensive table listing the ARAR, a description of the ARAR, whether it is applicable, or relevant and appropriate, or to be considered, what category it falls in, and for each remedial alternative, the affected remedial component and how will the component meet or not meet which specific rule or criteria of the ARAR or TBC.

Response

CRA has revised these tables and appendix consistent with previous comments on the OU RI/FS Report.



Ohio EPA Attachment 1 Comment No. 2

ARAR tables 2.1, 2.2, and 2.3 and Appendix E are long and confusing, and comparable state and federal rules are not applied consistently. Most of the state ARARs apply to programs that have been delegated to the state from the federal government. Including both the state and federal rules and regulations is unnecessarily redundant. According to EPA OSWER Publication 9234.2-05/FS, December 1989, CERCLA Compliance with State Requirements guidance,

"EPA believes that if a State is authorized to implement a program in lieu of a Federal agency, State laws arising out of that program constitute the ARARs instead of the Federal authorizing legislation. A stringency comparison is unnecessary because State regulations under Federally authorized programs are considered to be Federal requirements."

For this reason, the Federal ARARs that are duplicative of State ARARs should be removed from ARAR list. A list of Federal ARARs that can be removed is:

*40 CFR Part 6
40 CFR 61
40 CFR Part 81
40 CFR Part 122
40 CFR Part 125
40 CFR Part 141
40 CFR Part 261
40 CFR Part 264
40 CFR Part 262
40 CFR Part 267
40 CFR Part 268
49 CFR Part 171
40 CFR Part 257
40 CFR Part 403
Clean Water Act
Safe Drinking Water Act
Solid Waste Disposal Act, 42 U.S.C. 6901*

Response

CRA has revised as requested.



Ohio EPA Attachment 1 Comment No. 3

The ARAR list should include only those requirements that are ARARs. If rules or regulations are not applicable, or relevant and appropriate, they should not be included in the tables. For example, for OAC 3745-76-03, it is stated that this regulation does not apply because of the demonstration that NMOC emissions will be less than 50 Mg/year, so this regulation should not be included in the table. Other ARARS would apply to OU2 components, i.e. groundwater quality, but not OU1. Please delete those ARARs that are "not applicable" for any of the three OU1 remedy alternatives.

Response

CRA has revised as requested.

Ohio EPA Attachment 1 Comment No. 4

City of Moraine storm water management ordinances should be listed as TBCs.

Response

CRA has revised as requested.

Ohio EPA Attachment 1 Comment No. 5

U.S. EPA and Ohio EPA are still in the process of reviewing the FS. Concurrent with that review, U.S. EPA has initiated a series of three party conference calls (U.S. EPA, Ohio EPA, and the PRP group and consultants) to expedite revision of the FS as agency review progresses. Some elements of the alternatives under evaluation remain vague (how potential hot spots will be handled, for example) and Ohio EPA reserves the right to identify additional ARARs and/or revisit existing ARARs once the final configuration of the alternatives is established.

Response

CRA has revised as requested.



**CONESTOGA-ROVERS
& ASSOCIATES**

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Reference No. 038443-12

Should you have any questions on the above, please do not hesitate to contact us.

Yours truly,

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VC/ca/107

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